

FlexWave™ WMX 100/105

WiMAX Subscriber Unit



The FlexWave™ WMX 100 series subscriber unit allows service providers to take full advantage of the growing WiMAX market. The FlexWave WMX 100 is economically deployed and delivers the features required to address the underserved small business, home office, and residential markets. With a FlexWave WMX 100 subscriber unit, end users can browse web pages, make voice calls, view streaming video, and download files—simultaneously and at multi-megabit speeds over a robust wireless link.

ADC offers FlexWave WMX 100 models operating in 2.5 GHz, 3.5 GHz, and 5 GHz bands using spectrum efficient TDD scheduling. FlexWave WMX 100 units are compliant with the 802.16-2004 standard and offers software upgradeability to the 802.16e-2005 amended standard in some models (WMX 105). The FlexWave WMX 100 system delivers superior link performance, unsurpassed quality of service, and a broad range of networking features for optimized WiMAX deployment.

Features:

- IEEE 802.16-2004 compliant and upgradeable to 802.16e-2005 (some models)
- Superior QoS for multi-service support including premium voice services
- 2.5 GHz, 3.5 GHz and 5 GHz frequency bands
- LOS, OLOS, NLOS deployments

SPEC SHEET



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Providers can install the FlexWave WMX 100 in minutes. The units do not require a direct line of sight with the base station, and they support centralized WiMAX provisioning from the remote management and monitoring station. The FlexWave WMX 100 subscriber unit consists of an outdoor unit with an integral antenna that connects to a compact indoor unit via a standard outdoor-rated Cat-5 cable, which carries ethernet traffic and system power between indoor and outdoor units. An optional external antenna is available for even greater gain.

ADC offers two FlexWave WMX 100 models designed to meet a variety of subscribers and network requirements: FlexWave WMX 100 and 120. The choice of capabilities includes: IP networking, integrated VoIP processing, extended range antennas, and a host of features allowing simultaneous differentiated services for the small enterprise and home office user.

Typical Applications

- Economical last mile access solution for small to medium enterprises, home offices, consumers and remote sites
- QoS enabled wireless T1/E1 services for enterprise voice and data
- "Wireless DSL" service offering greater bandwidth and lower cost to the end user
- Offer Voice over IP-based services with single integrated solution
- Create "hot zones" by backhauling Wi-Fi access used for municipal and mesh network configurations

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Specifications

RADIO AND SYSTEM SPECIFICATIONS

Compliance:

IEEE 802.16d-2004 (3.5T1, 3.5T2), ETSI HiperMAN, 802.16e-2005 upgradeable (some models)

Duplexing Mode, PHY:

TDD, OFDM 256 FFT

Frequency:

3.3 – 3.4 GHz, 3.4 – 3.6 GHz, 5.725 – 5.925 GHz
Future: 2.5 – 2.7 GHz, 3.6 – 3.8 GHz, 5.15 – 5.35 GHz, 5.475 – 5.725 GHz

Channel Bandwidth

WMX100:

3.0 MHz, 3.5 MHz, 5.5 MHz, 7.0 MHz

Future: 1.75 MHz, 5 MHz, 10 MHz

WMX 105:

2.5 GHz (5.0 MHz, 10.0 MHz)

3.5 GHz (5.0 MHz, 7.0 MHz, 10.0 MHz)

250 KHz

Step Size:

Radio Output Power:

20 dBm; all frequencies

Receiver Sensitivity:

-95.1 dBm

Modulation:

BPSK, QPSK, 16QAM, 64QAM

Forward Error Correction:

Convolution coding 1/2, 2/3, 3/4

Integral Antenna Gain:

16 dBi @ 3.5 GHz

Optional External Antenna:

Yes

IP NETWORKING FEATURES/OPTIONS

IP Version:

IPv4 (RFC 791)

Bridging Mode:

IEEE 802.3d

VLANs:

IEEE 802.1 P/Q

SECURITY/ENCRYPTION

Authentication:

X.509 certificates

Encryption:

3DES, AES CCM 128, 1024

MULTI-SERVICE/MULTI-USER SUPPORT

Traffic Classifier:

MAC DA/SA, 802.1 P/Q, IP SA/DA, IP Protection, IP TOS, TCP/UDP Port

Scheduling/QoS:

UGS, rtPS, nrtPS, BE, CIR, MIR

Active Connected Hosts:

5 max

Uni-directional Service Flows:

8 max

MANAGEMENT

Remote Management and Monitoring:

WaveCenter EMS Pro

Remote Management Access:

Telnet, SNMP, HTTP

Provisioning:

Centralized using WaveCenter EMS Pro

SNMP:

MIB II (RFC 1213), Enterprise MIB; IEEE 802.16f MIB

MECHANICAL

Outdoor Unit Dimensions (WxHxD):

20.5 cm x 20.5 cm x 6.7 cm (8.0" x 8.0" x 2.4")

Weight:

5.2 lbs (2.4 kg) (including pole mount)

Indoor Unit Dimensions (WxHxD):

6 cm x 3.1 cm x 14.5 cm (2.4" x 1.2" x 5.7")

Weight:

1 lbs

IDU-ODU Distance:

up to 100 m

ELECTRICAL

Input DC Voltage:

DC 36 – 57V (IEEE 802.3af compliant)

Max Input Current:

0.27A @ 48V DC

ENVIRONMENTAL

Weather Protection:

IP65/NEMA-4

Operating Temperature (Outdoor Unit):

-35° to 60° C (-31° to 149° F)

Humidity (Outdoor Unit):

5 – 95% noncondensing

RoHS Compliance:

yes

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